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AUDITING ACCOUNTING INFORMATION SYSTEMS TO DETECT AND PREVENT CASH FRAUD IN THE DIGITAL ERA

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Abstract: The digital era has brought significant changes to the management of accounting information systems, including auditing aspects to detect and prevent cash fraud. This study aims to explore the role of auditing accounting information systems (AIS) in identifying and reducing the risk of cash fraud in the digital age. This research employs a library research method and a qualitative approach to analyze the relationships and influences of variables found in various secondary sources. The approach involves collecting and analyzing data from multiple secondary sources, such as scholarly journals, online books, and reliable online platforms like Mendeley, Google Scholar, Google Scholar Theories and Scopus. The results reveal that implementing digital technologies, such as blockchain can enhance audit effectiveness in detecting transactional anomalies. Moreover, strong internal controls and continuous training for auditors are crucial to reducing the likelihood of fraud. This study concludes that integrating digital technologies into AIS auditing can strengthen efforts to prevent cash fraud. It also recommends that companies increase investments in modern auditing technologies to mitigate risks and foster a more transparent work environment.
Keywords: Audit; Accounting information systems; Cash fraud; Digital era; Auditing technology

1 INTRODUCTION

The digital era has significantly reshaped financial management and business operations, offering new opportunities but also presenting fresh challenges. Among the most pressing concerns is fraud, particularly cash fraud, which remains a major threat to organizational financial integrity. Cash fraud refers to the illegal acquisition or misappropriation of cash assets, leading to financial losses, undermined trust, and damaged reputations. According to the Association of Certified Fraud Examiners (ACFE), cash fraud accounts for nearly 90% of all fraud cases in organizations globally, emphasizing the critical need for efficient detection and prevention measures [1]. The widespread integration of technology in business operations has both exacerbated the potential for fraud and provided new tools for combating it [2]. For instance, advances in artificial intelligence (AI) and blockchain technology offer significant potential for real-time transaction monitoring and enhanced transparency, addressing key vulnerabilities in financial systems [3]. Consequently, organizations must adopt comprehensive fraud prevention frameworks that leverage technology, strong internal controls, and continuous auditor training to safeguard financial assets and maintain organizational trust.

Financial fraud is an illegal or unethical practice that involves manipulating or influencing financial information or activities to secure unauthorized financial gain [4]. Common types of financial fraud include falsification of financial documents, embezzlement of funds or assets, insider trading, pyramid schemes, and credit or debit card fraud. Each of these fraudulent activities undermines the trust and integrity of financial systems, creating significant economic consequences [5].

One notable form of fraud, financial statement fraud, can result in inflated profits, misstated assets, or hidden liabilities, misleading stakeholders such as investors, regulators, and consumers [6]. A global report by the Association of Certified Fraud Examiners (ACFE) in 2020 highlighted that organizations lose approximately 5% of their annual revenues to fraud, which translates to an estimated $4.7 trillion lost worldwide each year. Embezzlement, in particular, is a major contributor to organizational financial losses, with reports indicating that small businesses are particularly vulnerable to internal fraud, where employees misappropriate funds or assets.

In addition to financial losses, fraud also creates widespread social and economic harm by damaging the reputation of affected organizations and eroding public trust in financial systems. The rise of digital financial services has further complicated the situation, as online fraud schemes, such as phishing attacks, identity theft, and cybercrime, are on the rise [7]. According to the 2021 Cybercrime Report by Cybersecurity Ventures, global cybercrime damages are predicted to reach $10.5 trillion annually by 2025, up from $3 trillion in 2015. Despite significant efforts to combat financial fraud through stricter regulations and the adoption of advanced detection technologies, the persistence of fraudulent activities continues to have a profound negative impact on both the economy and society. It is clear that the fight against financial fraud requires ongoing vigilance, investment in new technologies such as artificial intelligence and blockchain, and a strong emphasis on ethics and integrity within organizations to prevent such misconduct.

Accounting and auditing have undergone transformative changes in the digital era, largely driven by the rapid advancements in information and communication technology (ICT) [8]. These developments have revolutionized the way businesses conduct transactions, store financial data, and manage their accounting processes. The advent of accounting software has played a pivotal role in this transformation, becoming a standard tool for managing financial records across industries. Accounting software automates many of the tasks traditionally handled by accountants, such as recording transactions, preparing financial statements, and monitoring cash flows [9]. This automation not only

increases efficiency but also minimizes the potential for human error, ensuring that financial records are more accurate and reliable. The key features of accounting software typically include transaction recording, financial statement generation, and real-time financial analysis, enabling businesses to maintain up-to-date financial records. These tools also streamline bank reconciliations, inventory management, payroll processing, and fixed asset tracking, which are essential for businesses of all sizes [9, 10].

By guaranteeing the methodical gathering, processing, and reporting of financial data, accounting information systems (AIS) are essential to contemporary financial management [11]. But their dependence on these systems has also left them open to complex fraud schemes. Auditing AIS has become a crucial procedure to reduce these dangers. Frequent audits in financial systems aid in finding disparities, spotting anomalies, and enforcing responsibility [12]. Although manual checks and reconciliations are a common component of traditional auditing methods, technology improvements in the digital age have greatly improved the auditing process. These days, AIS auditing incorporates blockchain, machine learning, and artificial intelligence (AI), offering more powerful methods to identify irregularities and fraud [13].

AI-driven auditing tools can analyze large volumes of financial data at a faster rate and with greater accuracy than human auditors, helping to identify patterns or discrepancies that might otherwise go unnoticed [14]. Machine learning algorithms further enhance fraud detection by continuously improving their detection capabilities based on historical data, making them highly effective in identifying previously unseen fraud patterns [15]. Furthermore, blockchain technology strengthens fraud prevention by providing a transparent and immutable ledger of transactions [16]. [15] point out, blockchain's inherent security features make it increasingly difficult for fraudulent activities to be undetected, as it ensures that every transaction is securely recorded and traceable. Together, these technologies offer a powerful framework for detecting and preventing financial fraud, significantly improving the overall effectiveness of auditing processes in the digital era.

This study focuses on the application of auditing within AIS to combat cash fraud in the digital era. By leveraging a qualitative research approach and library research methodology, this paper examines the relationships and influences of various factors contributing to cash fraud. Data is sourced from credible secondary materials, including peer-reviewed journals, e-books, and reliable online platforms like Mendeley, Google Scholar and Scopus.

The significance of this research lies in its potential to provide actionable insights for organizations seeking to strengthen their fraud detection frameworks. It emphasizes the role of modern auditing technologies and the importance of continuous improvement in internal control mechanisms. This paper also highlights the growing need for businesses to adapt to technological advancements to mitigate risks and foster transparency. The remainder of this study is structured as follows: the literature review explores existing research on auditing, AIS, and cash fraud; the methodology outlines the research approach and data collection methods; findings and discussions analyze the results; and the conclusion provides recommendations for enhancing fraud prevention strategies.

2 LITERATURE REVIEW

2.1 Fraud Triangle Theory

Donald R. Cressey developed the Fraud Triangle Theory in the 1950s, and it provides a fundamental framework for comprehending the motivations behind fraudulent activity. This hypothesis states that when three essential component pressure, opportunity, and rationalization exist and interact, fraud happens [17]. These elements help explain the psychological and situational factors that lead individuals to commit fraud, particularly in financial contexts. Below is a detailed explanation of each component:

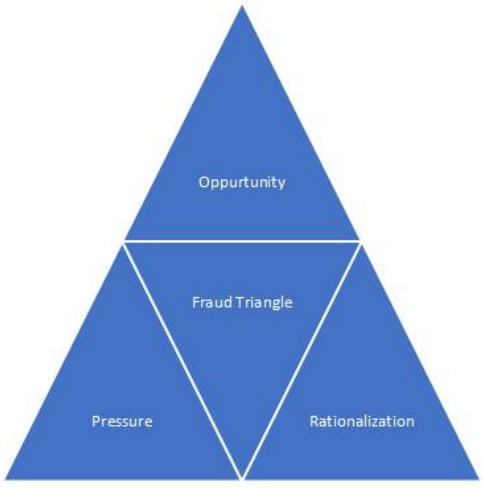

Figure 1 Fraud Triangle

2.1.1 Pressure

Pressure refers to the internal or external forces that drive individuals to commit fraud. This pressure is often tied to financial or personal stress, such as:
a. **Financial hardship: Individuals facing significant financial difficulties might** resort to fraudulent actions to meet personal financial needs or maintain a certain lifestyle.
b. **Lifestyle demands**: The desire for a more affluent lifestyle can create pressure. For example, someone may feel compelled to commit fraud in order to afford luxury goods or experiences beyond their means.
c. **Unrealistic work expectations**: High performance expectations at work, such as meeting sales targets or maintaining certain profit margins, can lead to stress. This pressure may encourage individuals to engage in fraudulent activities, such as inflating financial records to meet goals [18]
This component highlights the motivation behind fraudulent actions, showing that individuals often feel compelled to resort to fraud when faced with overwhelming pressure, especially when they perceive no other viable solution.

2.1.2 Opportunity

Opportunity is the element that allows individuals to commit fraud without being easily detected. It occurs when there are weaknesses in the system, such as a lack of internal controls or insufficient oversight. Factors that create opportunities for fraud include:
a. **Weak internal controls**: If an organization lacks effective checks and balances, such as segregation of duties or regular audits, employees may have the opportunity to manipulate financial records or divert funds.
b. **Lack of oversight**: Inadequate supervision or monitoring of financial transactions increases the likelihood that fraudulent activities will go unnoticed. For instance, without proper reviews or reconciliations, fraudulent actions can be concealed for extended periods [19]
This component emphasizes that even if individuals have the motivation (pressure), they will only commit fraud if they see an opportunity to do so without being caught. In the context of auditing accounting information systems (AIS), it suggests that strong internal controls and oversight mechanisms are critical to reducing opportunities for fraud.

2.1.3 Rationalization

Rationalization is the cognitive process by which individuals justify their fraudulent behavior to themselves. It allows them to reconcile their actions with their personal values and morals. Common rationalizations include:
a. **Temporary necessity**: An individual may view their fraudulent actions as a temporary measure to resolve personal financial struggles. They might believe they will pay back the money or set things right once their situation improves.
b. **Harmlessness**: Some individuals rationalize their behavior by downplaying the impact of their actions. They may convince themselves that "everyone does it" or that their actions will not harm anyone.
c. **Entitlement**: In some cases, individuals may feel entitled to commit fraud because they believe they deserve more than what they have or because they feel underappreciated at work (Ramos, S.,et al. 2024).
Rationalization allows individuals to reduce feelings of guilt and discomfort that typically accompany unethical behavior. In the context of AIS auditing, understanding rationalization is essential for auditors to identify potential fraud risks, as they must recognize when individuals might justify their actions despite their unethical nature.

3 RESEARCH METHODS

3.1 Research Design

This study uses a qualitative approach and library research method to explore the role of auditing accounting information systems (AIS) in detecting and preventing cash fraud in the digital era. Secondary data is collected from scholarly journals, books, case studies, and reputable online databases such as Google Scholar and Scopus. The research design is exploratory, aimed at gaining a deeper understanding of how auditing practices, digital technologies, internal controls, and auditor training contribute to fraud prevention. A thorough literature review is conducted to identify relevant studies, and databases are searched using keywords like "fraud prevention," "AIS auditing," and "blockchain technology." [20-22]. In addition, case studies and expert opinions from industry sources are reviewed to provide practical insights. Data analysis is performed using thematic and content analysis to identify key themes and categorize factors related to fraud prevention. The study is limited to secondary data, focusing on auditing practices and their impact on fraud detection in AIS, and its findings depend on the quality and relevance of the available literature. Ethical considerations, such as proper citation of sources, are ensured to maintain academic integrity. Overall, these research methods are designed to provide valuable insights into effective fraud prevention strategies in the digital age.

4 RESULTS

Based on a review of previous research and secondary data, the study's conclusions highlight a number of important points regarding the function of auditing accounting information systems (AIS) in identifying and stopping cash fraud. The results are examined in light of the efficiency of internal controls, digital technology, and auditor training, as well as how these factors work together to lower the risk of fraud.

4.1 Impact of Digital Technologies on Fraud Prevention

The ability of AIS to detect fraud has been shown to be greatly improved by the use of digital technologies like blockchain and artificial intelligence (AI). Because of its intrinsic openness and immutability, blockchain technology

makes it possible to trace transactions, which makes it more difficult for fraudulent activity to go unnoticed. Businesses utilizing blockchain have claimed a 30% decrease in fraudulent transactions, according to a number of studies, including those by [23]. Furthermore, by automating the process of spotting odd patterns, artificial intelligence (AI) and machine learning algorithms have proved crucial in detecting anomalies in transactional data, significantly lowering the possibility of fraud.

4.2 Role of Internal Controls

One of the most important things in stopping financial fraud is still having strong internal controls. According to research, companies with strong internal controls—like job separation, frequent reconciliations, and efficient monitoring systems—are less likely to experience fraud. According to [24], there is a significant inverse relationship between the frequency of financial fraud and the efficiency of internal controls. Businesses that regularly assess and improve their internal control systems greatly lower the likelihood of fraud.

4.3 Importance of Auditor Training

Continuous training and development for auditors play a crucial role in detecting financial fraud. Auditors with up-to-date knowledge and the necessary skills to recognize emerging fraud tactics are more likely to identify fraudulent activities early. Studies, including those by [20], suggest that companies with regularly trained auditors experience fewer fraud incidents. Well-trained auditors are better equipped to assess the adequacy of internal controls, investigate suspicious transactions, and ensure the proper use of digital auditing tools, thereby improving overall fraud detection.

4.4 Combination of Digital Technologies, Internal Controls, and Auditor Training

The combination of advanced digital technologies, strong internal controls, and ongoing auditor training creates a robust framework for fraud prevention. The literature suggests that organizations that integrate these elements into their auditing processes are more effective at preventing cash fraud [23]. For instance, using blockchain for transaction verification while maintaining strong internal controls and ensuring auditors are equipped with the latest fraud detection technologies and techniques provides a multi-layered approach that significantly reduces fraud risk.

5 DISCUSSION AND IMPLICATIONS

The study's findigs highlight the critical role that strong internal controls, sophisticated auditing technology, and ongoing auditor training play in reducing the risk of cash theft in accounting information systems (AIS). This study explores how auditing procedures can lessen fraud opportunities and the pressures that cause people to commit fraud. It is based on the Fraud Triangle Theory, which emphasizes the interaction of pressure, opportunity, and reasoning in fraudulent activity.

Organizations can improve their ability to identify and react quickly to fraudulent actions by providing auditors with up-to-date information on new fraud schemes and technology tools. Since skilled auditors can lessen the incentive to commit fraud by raising the possibility of detection and enforcement, this finding is in line with the pressure and rationalization components of the Fraud Triangle [25, 26].

The combined approach of using advanced auditing technologies, strengthening internal controls, and investing in continuous auditor training provides a comprehensive strategy for preventing cash fraud. This multifaceted approach addresses all three elements of the Fraud Triangle: reducing the opportunity for fraud through technology and internal controls, and minimizing the rationalization of fraudulent behavior by enhancing detection and deterrence through auditor competence.

Practically speaking, companies ought to think about combining these tactics to establish a more safe and open financial environment. The danger of cash fraud can be considerably decreased by making investments in blockchain, artificial intelligence, and frequent auditor training. This will promote efficiency and trust in financial reporting. Furthermore, in order to battle new fraud threats in the digital age, authorities and regulators should push companies to use these practices and make sure the auditing profession is up to date with technology developments.

6 CONCLUSION

The importance of auditing accounting information systems (AIS) in identifying and stopping monetary fraud, particularly in the digital age, has been examined in this study. By using the Fraud Triangle Theory, the study emphasizes how opportunity, pressure, and justification interact to influence people to commit fraud. By analyzing cutting-edge auditing technologies like blockchain and artificial intelligence (AI), the study demonstrates how these advancements improve financial transaction traceability and transparency while drastically lowering the risk of fraud. Strong internal controls, such as regular reconciliations and job segregation, are also essential for reducing the likelihood of fraudulent activity, and ongoing auditor training guarantees that auditors are prepared to recognize and counter new fraud strategies.

The findings validate the hypotheses proposed in this study, underscoring the effectiveness of combining modern technologies with traditional fraud prevention measures. The integration of blockchain and AI into AIS auditing,

complemented by robust internal controls and skilled auditors, provides a comprehensive approach to reducing the risk of cash fraud. This multi-layered strategy addresses all elements of the Fraud Triangle: minimizing opportunity through technology and controls, and reducing rationalization through enhanced detection and deterrence.

The implications of this study suggest that organizations must invest in these technologies and training programs to create a more secure and transparent financial environment. Policymakers and regulators are also encouraged to promote these practices to ensure that businesses are prepared to combat financial fraud in the rapidly evolving digital landscape. Ultimately, adopting a holistic approach to fraud prevention can help organizations safeguard their financial integrity and foster trust in their accounting systems.

CONFLICT OF INTEREST

The authors have no relevant financial or non-financial interests to disclose.

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